IN THE SPECIFICATION:

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~strikethrough~~.

Please REPLACE paragraph [0050] with the following paragraph:

[0050] The directional element detection unit 143 detects directional data in the direction of each pixel of x = -1, 0, 1, ..., n (S306). The directional data is calculated by mathematical expression 6.

$$D(x) = \sum_{i=-2}^{2} \left\{ coeff[i] \cdot \left| \hat{f}_n(v-1, h-x+i) - f_n(v+1, h+x+i) \right| \right\} \quad \ldots (6)$$

where, coeff is a predetermined constant value having a weight in the center of i = -2, -1, 0, 1, 2, and $\hat{f}_n$ (v, h) is a pixel value that is low frequency filtered in the vertical direction.

Please REPLACE paragraph [0054] with the following paragraph:

[0054] The reliability detection unit 145 detects a reliability of the global minimum directional data calculated at the global/local minimum directional value calculation unit 144. In other words, the reliability detection unit 145 detects whether the directional data, which is calculated as the global minimum directional data from an adjacent low direction, monotone decreases (S312). When the directional data does not monotone decrease, the interpolation is operated with respect to the local direction (~~S314~~S318). Moreover, when the gradient of the global minimum directional data and the local minimum directional data is less than a second threshold (T2), the interpolation is operated with respect to the local direction (S318), otherwise, the interpolation is operated with respect to the global direction (~~S318~~S316).